

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-37 (canceled)

Add the following claims 38-56.

Claims

38. (new) An isolated nucleic acid molecule encoding the amino acid sequence of SEQ ID NO:2.
39. (new) The nucleic acid molecule according to claim 38 which is a DNA molecule.
40. (new) The nucleic acid molecule of Claim 39, wherein said DNA molecule is a cDNA molecule.
41. (new) A human 5-HT_{4(h)} receptor encoded by the nucleic acid molecule of Claim 38.
42. (new) A DNA expression vector comprising a nucleic acid molecule of Claim 38.
43. (new) A host cell transformed or transfected with the vector of Claim 42.
44. (new) The host cell according to Claim 43, which cell is a mammalian cell.
45. (new) The host cell according to Claim 44, which mammalian cell is a COS-7 cell.
46. (new) An isolated receptor protein comprising the amino acid sequence of SEQ ID NO:2.

47. (new) A HEK 293 or COS-7 5-HT_{4(h)} cell line transfected with the expression vector of Claim 42.
48. (new) A pharmaceutical composition comprising a molecule according to any of Claim 46 with a pharmaceutically acceptable carrier, diluent or excipient therefor.
49. (new) A method of determining whether a compound is an agonist or an antagonist of a ligand of a human 5-HT_{4(h)} receptor, which method comprises contacting a cell transformed or transfected with an expression vector according to Claim 42 capable of expressing said receptor with said compound in the presence of said ligand and monitoring cAMP formation in said cell, wherein a change in cAMP formation in the cell identifies the compound as an agonist or an antagonist.
50. (new) The method of Claim 49 wherein said cell is a human cell.
51. (new) A method of determining whether a compound binds to a human 5-HT_{4(h)} receptor which method comprises contacting a cell, or a membrane preparation from the cell wherein the cell was transformed or transfected with an expression vector according to Claim 42 capable of expressing said receptor, with said compound and determining the binding affinity of said compound for said receptor.
52. (new) A kit for determining whether a compound is an agonist or an antagonist of a 5-HT_{4(h)} ligand, which kit comprises a cell according to Claim 42, means for contacting said compound and said ligand with said cell and means for measuring camp formation in said cell.
53. (new) A kit according to Claim 31 wherein said cell is a COS-7 cell.
54. (new) A pharmaceutical composition incorporating the nucleic acid sequence according to Claim 1 together with a pharmaceutically acceptable carrier, diluent or excipient therefor.

55. (new) A method of identifying a ligand for 5-HT_{4(h)} receptor, which method comprises contacting a cell expressing said receptor with said compound to be tested and monitoring the level of a 5-HT_{4(h)} mediated functional or biological response.
56. (new) A compound identifiable as an agonist or antagonist according to the method of Claim 55.